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| 09/590,521 | 06/09/2000 | Arturo A. Rodriguez | A-5704 | 1994 |

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SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

SRIVASTAVA, VIVEK

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2611

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/590,521

Applicant(s)

RODRIGUEZ ET AL.

Examiner

Vivek Srivastava

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 50-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 50-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 50, 51, 53, 62 – 68, 73 and 75 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown (5,771,435).

Considering claims 50, Brown discloses receiving information from a user to switch to a VOD version of a program (see col 2 lines 55-57), since VOD provides a level of random access functionality i.e. VCR type functions like fast forward, rewind, pause etc. (see col 3 lines 38-41), thus 'receiving information identifying a first level of random access functionality' is disclosed. It is noted that since VOD requires a separate stream which is allotted to a user after selection, the stream and program is provided to a user at a future time. Brown further discloses that VOD (which is a content delivery mode) streams are provided to a user based on the system's resources ensuring that the system's bandwidth is not strained by assigning to many VOD streams

(see col 3 lines 41-50). Thus, assigning a content delivery mode for a request for a second subscriber at a future time is based and is responsive to the request from the first subscriber. In other words, if the first subscriber is the last subscriber a VOD session can be assigned to, then the second subscriber's request for a VOD session is denied and the second subscriber must view a NVOD version of the program (see col 41 lines 50). Thus Brown discloses the claimed "assigning a content delivery mode for a second program responsive to at least the information". Brown further discloses providing VCR type functions for the VOD version and thus discloses the claimed "enabling a random access function for the first program by transmitting video data that is received at a location of the first user after a request for invoking the random access function is provided by the first user".

Considering claim 51, Brown discloses fast forward, rewind and pause (see col 3 lines 39 – 41).

Considering claim 53, Brown discloses NVOD functions associated with a first broadcast NVOD program, in particular, (1) stop viewing an originally-requested presentation of the interactive program and (2) start viewing another presentation of the application and VOD VCR functions associated with a broadcast VOD program (see col 3 lines 35-40). It is noted that the first program is a NVOD program and the second program is a VOD program assigned to different users.

Considering claim 62, Brown discloses an interactive NVOD/VOD system in which the system receives information from a user to view an NVOD program at a future time, i.e. after selection, where the NVOD program has limited level of random access

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functionality including (1) stop viewing an originally requested presentation and (2) start viewing another presentation (see col 2 lines 23-30). Brown further discloses during the NVOD program, a user can switch to a VOD version (which would meet the "second portion" of the program limitation) enabling a dedicated stream which would enable a user to exercise VCR functions like fast forward, rewind, pause, etc. (see col 3 lines 35-40). It should be noted that combination of functions for NVOD and VOD are different as discussed above.

Considering claim 63, Brown discloses the claimed fast forward, rewind and pause (see col 3 lines 35-40).

Considering claim 64, Brown discloses a NVOD delivery mode for the first portion of the program and a VOD delivery mode for the second portion of the program (see col 3 lines 30-40).

Considering claim 65, Brown discloses the same subject matter claimed in claim 62, including the first lag-time which met by the lag time associated with stopping a requested presentation or starting another presentation and a second lag time met by exercising VCR functions like pause, rewind, fast forward (col 2 lines 23-30 and col 3 lines 35-40). It is noted that since no random access functions are "instantaneous", the first and second broadly claimed lag times are met by Brown.

Regarding claim 66, see claim 63.

Regarding claim 67, see claim 64.

Considering claim 68, Brown discloses an interactive NVOD/VOD system wherein a user requests a NVOD program which enables a limited amount of random

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access functions, including (1) stop viewing an originally requested presentation and (2) start viewing another presentation which meets the claimed "providing a user with a first selectable option". Brown further discloses providing a user with selecting a VOD option which results in VOD random access functions being accessible after a second period of time (see col 3 lines 35-40). It should be noted that since the user has to wait for the broadcast of the NVOD program (since NVOD is not instantaneous as VOD) the second period is shorter than the first period since the second option of selecting a VOD version is at the time of offering the NVOD presentation (see col 3 lines 25-40).

Considering claim 73, Brown discloses receiving a user reservation request as discussed above. Brown further discloses assigning two content delivery modes to a plurality of digital transmission channels responsive in part to a user reservation request, note VOD mode and NVOD mode (see col 2 lines 47 – 67) and that VOD requires a separate stream and is thus "session" based and that NVOD is non-session based. Brown also discloses that the VOD mode enables a user with greater random access functionality by providing VCR type functions than the limited functionality associated with the NVOD mode (col 1 lines 55 – 60, col 3 lines 30 – 50). Brown also discloses that some viewers are provided with a VOD session and others with a NVOD session and thus discloses the claimed "first level of random access functionality and the second level of random access functionality being enabled by video data received at respective user locations after respective requests for random access functions have been provided by respective users".

Considering claim 75, Brown discloses a VOD mode and a NVOD mode (see col 2 lines 47 - 67).

Claims 58 and 59 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al (6,543,053).

Considering claim 58, Li discloses an interactive video on demand system in which the user pays for the level of interactivity desired. Since the user pays for the level of interactivity desired (see col 14 lines 13-19), Li meets the claimed "receiving information identifying a level of random access functionality selected by a user for a program that is to be provided a future time, noting the a VOD requested program is delivered in the future. Further, LI discloses implementing a service priority mechanism to control the level of interactivity a user gets, thus Li discloses the claimed "enabling the level of random access functionality for the program responsive to at least a priority level corresponding to the user".

As to claim 59, Li discloses the claimed "wherein the priority level is determined responsive to at least billing information corresponding to the user" met by the "price a user is willing to pay" (see col. 14 lines 13-19).

Claims 79 rejected under 35 U.S.C. 102(e) as being antipated by Suzuki (previously cited).

Considering claim 79, Suzuki discloses an information transmission control means which allocates bandwidth to at least two different content delivery modes, A-

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class demand mode, B-class demand mode and a C-class demand mode (see col 13 lines 24-33, col 15 lines 1-7) in a fiber optic system for delivering digital programming (see col 6 lines 1-15). Further, Suzuki discloses a user demand request, wherein the demand request specifies a plurality of preferences including random access functionality (see "copy permission request" for copying program onto VTR which inherently provides VCR functions – col 19 lines 8-18, col 15 lines 39-60). Suzuki also discloses allocating demand channels, A-demand, B-demand and C-demand according to a user specified time (col 16 lines 24-33, col 14 lines 55-64) and providing the allocated channels according to a schedule as discussed above, thus Suzuki discloses the claimed "network manager". Further, Suzuki discloses a server that authorizes a to copy a program on to a VTR thus enabling VCR type random access functions (see col 15 lines 38 – col 16 lines 18, col 18 lines 4 – 31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 52, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Gordon et al (6,253,375).

Regarding claim 52, Brown fails to disclose the claimed wherein the first program is transmitted via a first digital channel and the video data for enabling the random access function is transmitted via a second digital channel.

Gordon teaches and interactive distribution system which transmits an information channel and a command channel which is used with the information channel (see Abstract, col 2 lines 13-34). It would have been obvious utilizing two separate channels, one for the video data and one for random access function would have limited the congestion of transmitting all the data on one channel and would have enabled viewing of the video channel even if the random access channel was non functioning. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize two channels as claimed to limit congestion and to enable viewing even if the control random access channel was not functioning.

Considering claims 54 and 55, Brown discloses receiving information from a user as to NVOD or VOD program each of which have a level of random access functionality (see col 2 lines 24-30, col 3 lines 34-40). It should be noted that both NVOD and VOD are requested programs and are thus provided to the user in the future. Brown fails to disclose the claimed allocating bandwidth to a plurality of auxiliary digital transmission channels responsive to at least the information, wherein the plurality of digital transmission channels enable random access functionality for programs transmitted via a plurality of other digital transmission channels and wherein each of the plurality of digital channels enables random access functionality for a plurality of other digital transmission channels.

Gordon teaches and interactive distribution system which transmits an information channel and a command channel which is used with the information channel (see Abstract, col 2 lines 13-34). It would have been obvious utilizing two separate channels, one for the video data and one for random access function would have limited the congestion of transmitting all the data on one channel and would have enabled viewing of the video channel even if the random access channel was non functioning. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown to include the claimed allocating bandwidth to a plurality of auxiliary digital transmission channels corresponding to a plurality of VOD channels responsive to received information (i.e. determining if received information strains system resources before allocating another VOD stream – see col 7 lines 48-50) to limit congestion and to enable viewing even if the control random access channel was not functioning.

Claims 56, 57, 60 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,771,435) in view of Candelore (6,057,872).

Regarding claims 56 and 57, Brown discloses receiving a request to VOD programs which have a level of random access functionality including fast forward, rewind and pause (see col 3 lines 35-41). Brown fails to disclose the claimed enabling the level of random access functionality responsive to at least a history of program purchases by the user.

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Candelore teaches providing a user with PPV or VOD programming based on a user's history of purchases, in particular, a PPV or VOD program is provided free based on five prior PPV or VOD purchases (see col 3 lines 18-39). It would have been obvious to provide the user with claimed level of random access functionality responsive to a history of program purchases by user (i.e. providing a user with a VOD program enabled with VCR functions) to reward a user for being a frequent customer by saving the user money for a VOD session. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown to include the claimed limitation to reward a user for frequent program purchases.

Regarding claims 60 and 61, Brown discloses receiving a request to VOD programs which have a level of random access functionality including fast forward, rewind and pause (see col 3 lines 35-41). Brown fails to disclose the claimed enabling the level of random access functionality responsive to at least a determined characteristic.

Candelore teaches providing a user with PPV or VOD programming based on a user's history of purchases or behavior "characteristic", in particular, a PPV or VOD program is provided free based on five prior PPV or VOD purchases (see col 3 lines 18-39). It would have been obvious to provide the user with claimed level of random access functionality responsive to a behavior characteristic of program purchases by user (i.e. providing a user with a VOD program enabled with VCR functions) to reward a user for being a frequent customer by saving the user money for a VOD session. Therefore, it would have been obvious to one having ordinary skill in the art at the time

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the invention was made to modify Brown to include the claimed limitation to reward a user for frequent program purchases.

Claim 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,771,435).

Regarding claim 69, Brown fails to disclose the claimed wherein selecting the second option results in additional expense for the user. It would have been obvious to charge additional expenses for receiving a VOD version of the program to limit the number of VOD sessions to conserve the additional bandwidth required for a VOD version. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown to include the claimed limitation to dissuade user's from requesting a VOD version unless it is really wanted to conserve bandwidth.

Claims 70 – 72 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al.

Considering claim 70, Li discloses a VOD system which provides a user with a plurality of random access functions like ordering a VOD program, splitting off from a shared video stream to be assigned to a dedicated video stream enabling VCR type functions (see col 4 lines 59-67 and col 5 lines 20-27). Further Li, discloses the price or the amount a user is willing to pay is based on the consumption or amount of interactivity (col 14 lines 8-18). At the high-end, the user enjoys full interactivity without

a batching delay, at a median level the user enjoys full interactivity with a batching delay and at a limited level the user gets limited interactivity and a batching delay. However, Li fails to disclose the claimed communicating to the user a level of consumption of random access functionality responsive to enabling the plurality of respective random access functions. It would have been obvious to one skilled in the art to modify Li to include the claimed limitation to provide a user with the amount of interactivity consumed, i.e., high-end, median level, or limited to ensure the user is aware of the interactivity requested and consumed for billing purposes and to inform the user how much must be paid for the interactivity. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Li to include the claimed limitations to ensure a user knows what the user has paid for.

Claim 71 is met by that discussed in claim 70.

Considering claim 72, Li fails to disclose the claimed graphical representation indicating the level of consumption of random access functionality. However, it would have been obvious to modify Li to include the claimed limitations to provide a user with a better visual representation of the amount of interactivity with respect to the cost of interactivity.

Considering claim 81, Li discloses a VOD system with DHCT which receives MPEG streams (see col 2 lines 45 – 50). Note requests for VOD programming meets the claimed “transmitted to the user at a future time”. Li further discloses, a user can receive a dedicated VOD stream per request wherein the claimed “bandwidth allocation manager” is inherently included to allot bandwidth for the dedicated stream (see col 8

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lines 10-20) when available. Li also discloses varying levels of random access available to the user, in particular high end, median level and least cost (see col 14 lines 12 - 18). By invoking a particular level, a user is provided with the level of random access or interactivity desired (see col 14 lines 12 - 18).

Li fails to disclose the claimed memory for storing information identifying a desired level of random access functionality identified by a user for a program to be transmitted to the user at a future time. It would have been obvious to modify Li to include the claimed feature to provide any easy means for billing by having the server poll the DHCT for billing information. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Li to include the claimed memory in the DHCT to enable easy, fast and readily available by polling the DHCT for the desired level of random access identified by the user.

Claims 74 and 76 – 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,771,435) in view of Suzuki (6,401,243).

Considering claim 74, Brown fails to disclose the claimed wherein the user reservation request identifies a date and time that a user wishes to reserve for viewing a program in the future, a preferred content delivery mode, and a price that a user is willing to pay to have a reservation request fulfilled.

Suzuki teaches identifying a date and time that a user wishes to reserve for viewing a program and a price a user is willing to pay to have the reservation request fulfilled (see col 16 lines 24-33 and col 14 lines 55-64, col 13 lines 24-34, col 16 lines 1-

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7, note although the date is not specifically disclosed by Suzuki, it must inherently be included in the request to differentiate a same day delivery from a one-day delivery). It would have been obvious identifying a date and time that a user wishes to reserve for viewing a program and price a user is willing to pay would add flexibility in terms of time and price which would be beneficial to a user. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown to include the claimed limitations to add flexibility to the system.

Considering claims 76 and 77, Brown discloses receiving a user reservation request as discussed above. Brown further discloses assigning two content delivery modes to a plurality of digital transmission channels responsive in part to a user reservation request, note VOD mode and NVOD mode (see col 2 lines 47 – 67) and that VOD requires a separate stream and is thus “session” based and that NVOD is non-session based. Brown also discloses that the VOD mode enables a user with greater random access functionality by providing VCR type functions than the limited functionality associated with the NVOD mode (col 1 lines 55 – 60, col 3 lines 30 – 50). Brown also discloses that some viewers are provided with a VOD session and others with a NVOD session and thus discloses the claimed “first level of random access functionality and the second level of random access functionality being enabled by video data received at respective user locations after respective requests for random access functions have been provided by respective users”.

Brown discloses requesting a preferred delivery mode (VOD or NVOD) but fails to disclose the claimed request comprises a plurality of user preferences and wherein

the user reservation request identifies a date and time that a user wishes to reserve for viewing a program in the future, and a price the user is willing to pay to have the reservation request fulfilled.

Suzuki teaches identifying a date and time that a user wishes to reserve for viewing a program and a price a user is willing to pay to have the reservation request fulfilled (see col 16 lines 24-33 and col 14 lines 55-64, col 13 lines 24-34, col 16 lines 1-7, note although the date is not specifically disclosed by Suzuki, it must inherently be included in the request to differentiate a same day delivery from a one-day delivery). It would have been obvious identifying a date and time that a user wishes to reserve for viewing a program and price a user is willing to pay would add flexibility in terms of time and price which would be beneficial to a user. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Brown to include the claimed limitations to add flexibility to the system.

Considering claim 78, Brown discloses a VOD mode and a NVOD mode (see col 2 lines 47 - 67).

Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki.

Regarding claim 80, Suzuki fails to disclose the claimed wherein the network manager allocates bandwidth to an auxiliary digital transmission channel that enables random access functionality for a program transmitted by another digital transmission channel. It would have been obvious to modify Suzuki to include the claimed limitation

to prevent transmitting too much information on a single channel by balancing the transmission of data over a plurality of channels.

Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (6,543,053) in view of Gordon et al (6,253,375).

Regarding claim 82, Li fails to disclose the claimed wherein the program data is received by the DHCT via a first digital transmission channel and the video data is received by the DHCT via a second digital transmission channel.

Gordon teaches and interactive distribution system which transmits an information channel and a command channel which is used with the information channel (see Abstract, col 2 lines 13-34). It would have been obvious utilizing two separate channels, one for the video data and program data would have limited the congestion of transmitting all the data on one channel and would have enabled viewing of the video channel even if the program data was non functioning. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize two channels as claimed to limit congestion and to enable viewing even if the program data channel was not functioning.

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872 - 9314, (for formal communications intended for entry)

Or:

(703) 308- 5399 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Vivek Srivastava whose telephone number is (703) 305 - 4038.

The examiner can normally be reached on Monday - Thursday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Andy Faile, can be reached at (703) 305 - 4380.

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the group receptionist whose telephone number is (703) 305 - 3900.

VS

8/3/03



**VIVEK SRIVASTAVA
PRIMARY EXAMINER**